

IOSH Local Emphasis Program

IA/LEP 2 -

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 - Directive Number: **IA/LEP 2**
 - Subject: **Local Emphasis Program on Amputations**
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IOWA OSHA IA/LEP

Workforce Development Department

Iowa Occupational Safety and Health Administration

ABSTRACT

- Purpose:** To establish an inspection targeting system for implementing a Local Emphasis Program (LEP) to identify and to reduce workplace machinery and equipment hazards which are causing or likely to cause amputations.
- References:** OSHA Instruction CPL 2-0.102A, November 10, 1999, Procedures for Approval of Local Emphasis Programs (LEPs)
- Cancellations:** Local Emphasis Program on Amputations IA/LEP 2, January 1, 2008
- Action Office:** State of Iowa
- Originating Office:** State of Iowa
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By and Under the Authority of

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- I. Purpose. This instruction describes policies and procedures for implementing a Local Emphasis Program (LEP) to identify and to reduce workplace machine and equipment hazards which are causing or likely to cause amputations.
- II. Scope. This Directive applies State-wide.
- III. References.
 - A. OSHA Instruction CPL 2-0.102A, November 10, 1999, Procedures for Approval of Local Emphasis Programs (LEPs).
 - B. Iowa OSHA Standards 1910, Subpart J, General Environmental Controls, §1910.147, The Control of Hazardous Energy (Lockout/Tagout).
 - C. Iowa OSHA Standards 1910, Subpart O, Machinery and Machine Guarding.
 - D. Iowa OSHA Standards 1910, Subpart P, Hand and Portable Powered Tools & Other Hand-Held Equipment.
 - E. OSHA's Safety and Health Management Guidelines, 54 FR 3904, January 26, 1989.
 - F. OSHA Instruction CPL 02-00-025, January 4, 1995, Scheduling System for Programmed Inspections.
 - G. OSHA Instruction STD 01-05-019, September 11, 1990, 29 CFR 1910.147, The Control of Hazardous Energy (Lockout/Tagout) – Inspection Procedures and Interpretive Guidance.
 - H. Iowa OSH Instruction IACPL 2.103, August 1, 2004, IOSH Field Inspection Reference Manual (FIRM).
 - I. OSHA Publication 3157, A Guide for Protecting Workers from Woodworking Hazards.
 - J. OSHA Safety and Health Topics Web Page, Machine Guarding, <http://www.osha.gov/SLTC/machineguarding/index.html>
 - K. OSHA Safety and Health Topics Web Page, Control of Hazardous Energy, <http://www.osha.gov/SLTC/controlhazardousenergy/index.html>
 - L. OSHA Instruction CPL 02-00-051, Enforcement Exemptions and Limitations under the Appropriations Act.
 - M. Bureau of Labor Statistics (BLS), Table R1. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away From Work by Industry and Selected Natures of Injury or Illness, 2003, 2004, and 2005.

- N. Bureau of Labor Statistics (BLS), Table R6. Incidence Rates of Nonfatal Occupational Injuries and Illnesses by Industry and Case Types, Iowa, 2003, 2004, and 2005.
 - O. Bureau of Labor Statistics (BLS), Table R25. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away From Work by Source of Injury or Illness and Selected Natures of Injury or Illness, 1999, 2000, 2001, and 2002.
 - P. Integrated Management Information System (IMIS), data for §1910.147, §1910.212, §1910.213, §1910.217, and §1910.219 limited to fiscal years 1999, 2000, 2001, 2002, 2003, 2004 and 2005.
 - Q. Executive Office of the President, Standard Industrial Classification Manual, 1987.
 - R. Executive Office of the President, North American Industry Classification System, United States, 1997.
 - S. Executive Office of the President, North American Industry Classification System, United States, 2002.
 - T. Iowa Code, Chapter 88 Occupational Safety and Health Act.
- IV. Cancellations. Local Emphasis Program on Amputations IA/LEP 2, January 1, 2008.
- V. Application. This instruction applies to general industry workplaces identified pursuant to paragraph VII(B)(4), where **any** machinery and equipment that are likely to cause amputations are present (See Appendix D (not inclusive) for guidance on the types of machinery and equipment most often associated with amputations).
- VI. Background. The failure to properly apply machine guarding techniques and the failure to adequately control associated energy hazards during servicing and/or maintenance activities are primary causes of amputations. Iowa OSHA has determined that its system for scheduling amputation investigations should be revised to better target industries with amputation hazards. Iowa OSHA has modified its targeting methodology to identify additional industries to further reduce the number of amputations and fatalities.

The operation of machinery and equipment can be extremely dangerous, and compliance with Iowa OSHA's machine guarding and hazardous energy control standards needs to be improved. Injuries involving machinery and equipment often result in death or permanent disability, and Iowa OSHA's inspection history indicates that employee exposures to unguarded or inadequately guarded machinery and equipment, together with associated hazardous energy employee exposures during servicing and maintenance activities, occur in many workplaces. Subparts J, O, and P of 1910 provide for safety measures that need to be used for the safe operation, servicing and maintenance of machinery and equipment. Machinery and equipment are covered by standards such as, but not limited to, §1910.147, §1910.212, §1910.213, §1910.217, and §1910.219.

VII. Program Procedures. This LEP includes three major activities: outreach, targeting/selection, and inspection.

- A. Outreach. Iowa OSHA will continue to offer outreach programs that support the purpose of this LEP to identify and reduce workplace hazards associated with all types of machinery and equipment. Outreach programs with employers, professional associations, and local unions may include meetings, training, education, mailings, speeches or other activities designed to involve employee and management stakeholders in the identification and elimination of hazards associated with machinery. Employers with ten or fewer employees will be included in the outreach effort. Outreach materials may either be mailed directly, or made available upon request, to employers, professional associations, and local unions.
- B. Targeting/Site Selection. Inspections conducted under this LEP must be scheduled and conducted pursuant to the following priorities:
 - 1. The intent of the LEP is to target workplaces with machinery and equipment that cause (or are capable of causing) amputations and workplaces where amputations have occurred, in order to reduce amputation injuries while maximizing Iowa OSHA's inspection resources. Section VII(B)(5) lists the target industries by NAICS code. Enforcement activities will be scheduled and conducted following the guidelines set forth in CPL 02-00-051, Enforcement Exemptions and Limitations under the Appropriations Act using the most recent listing of the North American Industry Classification System (NAICS) codes found in Appendix A of CPL 02-00-051. For assistance, this (i.e., LEP on Amputations) Directive provides a comparison chart of the SIC and NAICS codes in Appendix B.
 - 2. Employers with ten or fewer employees are not to be inspected but are to be included in the outreach effort. Employers with greater than 10 employees company wide at any time during the previous 12 months are subject to an inspection per this Directive.
 - 3. Investigations (referrals) will continue to be scheduled from daily data provided by Iowa's Workers Compensation Division (Amputation/Death Reports). If an employer/establishment experiences an amputation in the workplace and IOSHA conducts an inspection, the inspection will be limited to the machinery involved in the amputation unless the establishment falls within the NAICS codes identified in this Directive. If the establishment is within those NAICS codes, then all equipment/machinery which pose an amputation hazard will be inspected pursuant to this Directive. If the establishment has undergone a comprehensive safety inspection or inspection of all equipment which

pose an amputation hazard per this Directive within the previous three years, only the equipment involved in the amputation will be addressed. An investigation may not be conducted for the following reasons:

- a. Information received is a duplicate of previously received information.
- b. Not enough information is received to determine if an amputation actually occurred or the information appears to be incorrectly coded and contact cannot be made with the employer or employee.
- c. The length of time between the date of accident and receipt of the report is 4 months or greater.
- d. The accident appears to be of a non-controllable (not covered by an Iowa OSHA standard) nature.
- e. In accordance with the US Department of Labor, Bureau of Labor Statistics, Occupational Injury and Illness Classification Manual 1992, the nature of injury does not involve an amputation.
- f. The amputation occurred outside the State of Iowa.
- g. The type of business involved is a farming operation with 10 or fewer employees (see CPL 02-00-051 section X).

4. Developing Inspection Lists. The Workforce Data and Business Development Bureau of Iowa Workforce Development will prepare a master list of establishments using the identified NAICS codes referenced at Section VII(B)(5) of this Directive.

Establishments on the master list are arranged alphabetically by company name. The list is then randomized and maintained by the Iowa Division of Labor Management Information section. Iowa OSHA will request from the Iowa Division of Labor Management Information section cycles of five to fifty employers from the random number table. Any establishment which had a comprehensive safety inspection or an inspection which involved all the equipment/machinery in accordance with this directive in the previous 36 months of generating the cycle will be deleted from the list.

Inspections may then be scheduled using the first cycle list.

Establishments on the cycle list may be inspected in any order, so that resources are efficiently used. Once a cycle has begun, all establishments in the cycle will be inspected before a new cycle is begun, except for carryovers that will be allowed as provided in OSHA Instruction CPL 02-00-025 at paragraph B.1.b.(1)(e).

Based on local knowledge, establishments that are not likely to have the targeted machinery and equipment, or firms known to be out of business may be deleted, documenting the basis for such determinations. CSHOs will proceed with the programmed inspection where it has been determined that a new business is using the same plant and equipment of the previous business.

5. National Data Selection Criteria: IMIS enforcement data from the following standards was reviewed when developing this targeting methodology: §1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*, §1910.212, *General Requirements for all Machines*, §1910.213 *Woodworking Machinery*, §1910.217, *Mechanical Power Presses* and §1910.219, *Mechanical Power-transmission Apparatus*.

The selected NAICS subsectors have High BLS Amputation Numbers coupled with High BLS Amputation Rates. They have also exhibited high IMIS numbers:

- 311 Food Manufacturing
- 315 Apparel Manufacturing
- 321 Wood Product Manufacturing
- 326 Plastics and Rubber Products Manufacturing
- 332 Fabricated Metal Product Manufacturing
- 333 Machinery Manufacturing
- 336 Transportation Equipment Manufacturing
- 337 Furniture and Related Product Manufacturing

Note: The 8 industry NAICS subsector codes are listed in ascending numerical order (not in the order of High IMIS violations, High BLS Amputation Numbers or High Amputation Rates).

- C. Inspection Procedures. Inspections initiated under this LEP will be scheduled and conducted in accordance with provisions of the FIRM, except as noted below.
1. Once an inspection has been scheduled and assigned for the identified establishment, the Iowa OSHA case files and OSHA IMIS database should be reviewed for the employer's citation and fatality/accident history prior to the opening conference.

2. At the opening conference, the CSHO will verify with the employer whether any of machinery and equipment in Appendix D or any other machinery and equipment that could cause amputations are present in the workplace. If any machinery and equipment associated with amputations are present in the workplace, the CSHO shall conduct an inspection of the machinery and equipment with particular attention to employee exposure to nip points, pinch points, shear points, cutting actions, and other point(s) of operation. The CSHO shall also consider and evaluate employee exposures during any of the following:
 - Regular operation of the machine;
 - Setup/threading/preparation for regular operation of the machine;
 - Clearing jams or upset conditions;
 - Making running adjustments while the machine is operating;
 - Cleaning of the machine;
 - Oiling or greasing of the machine or machine pans;
 - Scheduled/unscheduled maintenance; and
 - Locking out or tagging out.
3. The CSHO shall review all relevant OSHA 300 logs at the establishment for amputations associated with machinery and equipment. The CSHO shall also evaluate the employer's safety and health programs in accordance with the FIRM (Chapter II.A.4.a.) and any lockout/tagout program.
 - a. If the employer has no equipment covered by this LEP and the review of OSHA 300 logs reveals no amputation-related injuries or hazards, the CSHO shall follow the steps below to determine if an inspection should be conducted. If the CSHO has any independent evidence that an amputation had occurred at the workplace, an inspection shall be conducted and the case file shall be annotated with a description of the evidence.
 - b. If the CSHO, based on his/her professional judgment, has a good faith basis to believe there are amputation-related hazards present, an inspection shall be conducted and the case file shall be annotated with the reason(s).
 - c. If the employer has no equipment covered by this LEP and the CSHO has reviewed the OSHA 300 logs and found no amputation-related injuries or hazards, and has no other evidence of amputation hazards in the workplace, the CSHO shall discontinue the inspection and record their time as a "records only" inspection.

4. The IOSH Administrator, IOSH Public Service Executives, Lead CSHO and CSHOs should ensure that the requirements for case development (including significant cases) are being met.

VIII. Scheduling and Resource Allocation.

- A. Priority. Investigations of Workers Compensation referrals have a higher priority than inspections conducted under Site Specific Targeting (SST). When possible, inspections conducted under this LEP will be combined with SST inspections and/or other programmed and unprogrammed inspections. This LEP may be combined with other existing initiatives, such as other Local Emphasis Programs which identify targets on a different basis.
- B. Voluntary Protection Program (VPP) and Safety & Health Achievement Recognition Program (SHARP) Sites. Although this initiative will exempt participating worksites from programmed inspections, it will not exempt them from investigations of referrals from the Workers Compensation Division. Unless they choose otherwise, VPP and SHARP sites will be removed from Iowa OSHA's programmed inspection lists of targeted sites, for the duration of approved participation in the VPP and SHARP. The applicant worksite will be removed from the programmed inspection lists no more than 75 calendar days prior to the commencement of its scheduled pre-approved onsite review. The site will remain off those lists until official denial of the application; applicant withdrawal of its application; or, if the applicant is approved to the VPP or SHARP, subsequent cessation of active participation in either of the programs.
- C. Iowa OSHA Strategic Partnership Programs (OSP). This initiative exempts Non-Construction worksites following a comprehensive onsite enforcement inspection conducted to meet OSP verification requirements. An establishment operated by an OSP partner will be deleted from programmed inspection lists for the period of time established for deletions in the then-current OSHA Site-Specific Targeting Directive.

If the OSP is designed to comprehensively address a hazard covered by the Act, the IOSH Administrator may extend the deletion for one year if the partner continues to meet the conditions of the OSP agreement and demonstrates improved performance in areas measured by the OSP.

IX. Consultation Programs. The development and implementation of outreach programs for the LEPs may be a joint activity with Iowa OSHA Consultation & Education.

- A. Programmed inspection deferral will be conducted per the IOSH Field Instruction Reference Manual, IOSH Instruction IACPL 2.103, and IAC 875 Chapter 8. In addition, those employers who request an initial safety visit from the Iowa OSHA Consultation Program will be removed from the compliance scheduling list. Priority will be given to those employers on the current enforcement cycle list and prioritized in accordance with the Consultation Policy and Procedure Manual (CPPM).

Employers who withdraw their Iowa OSHA Consultation request will be returned to the amputation LEP list.

- X. Program Evaluation. An annual review for the previous calendar year is due by January 1 of the following year. Evaluations will be conducted annually for the duration of the program. Interim evaluations will be conducted as needed.

- XI. Relationship to Other Programs.

- A. Unprogrammed Inspections. Unprogrammed inspections will be conducted according to the FIRM (IOSHA Instruction IACPL 2.103) or other guidance documents. If the occasion for an unprogrammed (e.g., complaint, fatality) inspection arises with respect to an establishment that is also scheduled to receive a programmed inspection under the amputation plan, the two inspections may be conducted either concurrently or separately. (See also XII.C.)
 - B. Special Emphasis Programs. Some establishments may be selected for inspection under the Amputation Initiative and also under one or more other Iowa OSHA initiatives (National Emphasis (NEP) or Local Emphasis (LEP) Programs). Programs based upon particular hazards (such as silica or hexavalent chromium) or on particular industries (such as logging, scrap yards, or construction) or the Site Specific Targeting Initiative (SST) can be run concurrently with the Amputation Initiative.

Whenever an establishment is scheduled for inspection on the Amputation Initiative and on the current cycle of an NEP/LEP plan, the inspections may be scheduled at the same time. CSHOs will apply all applicable IMIS codes to the inspection. The employer's DUNS number must also be recorded for each inspection since it is important for tracking. (See also Section XIII.)

- XII. Recording and Tracking.

- A. Amputation Initiative Only Inspections. The OSHA-1 Forms must be marked as "programmed planned" in Item 24. In addition, the "LEP" and "NEP" values "AMPUTATE" should be recorded in Items 25c and 25d (the Amputation inspections are being coded under the NEP for ease of tracking). These are also to be recorded as partial inspections in Item 35 "Scope of Inspection."
 - B. Programmed and Unprogrammed Inspections. All General Industry inspections must be coded as an **amputation hazard** in the IMIS by marking "**AMPUTATE**" in the Strategic Plan Activity item 25(f) on the OSHA 1, when there is potential worker exposure to an amputation hazard.

- C. Amputation Initiative Combined with Unprogrammed Inspections. For all unprogrammed inspections conducted in conjunction with an Amputation inspection, the OSHA-1 Forms must be marked as "unprogrammed" in Item 24 with the appropriate unprogrammed activity identified. In addition, the "LEP" and "NEP" values "AMPUTATE" should be recorded in Items 25c and 25d. Optional information "N 20 AMPUTATE" should be completed when the unprogrammed activity was initiated because of an amputation.
 - D. Amputation Initiative Combined with NEP or LEP Inspections. For all programmed inspections such as NEPs and LEPs conducted in conjunction with an Amputations inspection, the OSHA-1 Forms must be marked as "programmed planned" in Item 24. In addition, the "LEP" and "NEP" values "AMPUTATE" should be recorded in Items 25c and 25d.
 - E. Complaint Inspections. Whenever an OSHA-7 is completed and the applicable complaint alleges the presence of amputation hazards, complete the OSHA-7 in the usual manner, and record "AMPUTATE" in the space in item 50.
 - F. Fatality and Catastrophe Inspections. Whenever an OSHA-36 is completed and the inspecting CSHO is able to identify at the site of the fatality/catastrophe the presence of amputation hazards, complete the OSHA-36 in the usual manner and record "AMPUTATE" in the space in item 36.
 - G. Referral Inspections. Whenever an OSHA-90 is completed and the applicable referral case has amputation hazards as one of the subjects, complete the OSHA-90 in the usual manner and record "AMPUTATE" in the space in item 30.
- XIII. Dun & Bradstreet's Number. The Data Universal Numbering System (DUNS) number, which is a required entry for all SST inspections, must be recorded in the appropriate field on the Establishment Detail Screen. In establishments where ownership has changed, enter the DUNS number for the new owner. If the new owner does not have a new DUNS number, enter the old DUNS number. Since the DUNS number is site-sensitive, the old DUNS number will give some useful data. The Establishment Detail Screen can be accessed by pressing F5 anywhere in any data entry form where establishment processing can be done. On the OSHA -1 inspection form, Item 8 displays the Establishment Name. Once the DUNS number is entered, it will appear in Item 9b on the inspection form.
- XIV. Appendices. The Appendices summarizing this LEP contain information developed to assist employers, employees, and compliance officers in the implementation, training and outreach requirements of this Program. Iowa OSHA may use its discretion in selecting whatever materials it deems appropriate for outreach purposes.

APPENDIX A

Related ANSI and ASME Standards

(This appendix is not an inclusive list of all ANSI and ASME standards that are associated with hazardous machinery and equipment.)

Iowa OSHA recognizes the value of national consensus standards in terms of useful guidance for employers and employees attempting to comply with specific Iowa OSHA standards.

Iowa OSHA's enforcement policy provides that a violation may be *de minimis* if an employer complies with a proposed standard or amendment or a consensus standard rather than with the standard in effect at the time of the inspection, and the employer's action clearly provides equal or greater employee protection. See Iowa OSHA Instruction IACPL 2.103, *Field Inspection Reference Manual*, Chapter III, Paragraph C(2)(g).

1. ANSI B11.1- Mechanical Power Presses
2. ANSI B11.2- Hydraulic Power Presses
3. ANSI B11.3- Power Press Brakes
4. ANSI B11.4- Shears
5. ANSI B11.5- Ironworkers
6. ANSI B11.6- Lathes
7. ANSI B11.7- Cold Headers and Cold Formers
8. ANSI B11.8- Drilling, Milling, and Boring Machines
9. ANSI B11.9- Grinding Machinery
10. ANSI B11.10- Metal Sawing Machines
11. ANSI B11.11- Gear Cutting Machines
12. ANSI B11.12- Roll-Forming and Roll-Bending Machines
13. ANSI B11.14- Coil-Slitting Machines
14. ANSI B11.15- Pipe, Tube, and Shape Bending Machines
15. ANSI B11.16- Metal Powder Compacting Presses
16. ANSI B11.17- Horizontal Hydraulic Extrusion Presses
17. ANSI B11.18- Machinery and Machine Systems for Processing Strip, Sheet, or Plate From Coiled Configuration
18. ANSI B11.19- Safeguarding When Referenced by the Other B11 Machine Tool Safety Standards
19. ANSI B5.37- External Cylindrical Grinding Machines (Centerless)
20. ANSI B5.42- External Cylindrical Grinding Machines (Universal)
21. ANSI B65.1- Printing Press Systems
22. ANSI B65.2- Safety Standard – Binding and Finishing Systems
23. ANSI B65.3- Safety Standard for Guillotine Paper Cutters
24. ANSI B7.1- Use, Care, and Protection of Abrasive Wheels
25. ANSI B151.5- Plastic Film and Sheet Winding Equipment
26. ANSI B151.20- Plastic Sheet Production Machinery
27. ANSI B155.1- Packaging Machinery and Packaging-Related Converting Machinery
28. ANSI B177.1- Three Roller Printing Ink Mills
29. ANSI O1.1- Woodworking Machinery

30. ANSI Z244.1- Control of Hazardous Energy - Lockout/Tagout and Alternative Methods
31. ASME B5.52M- Mechanical Power Presses, General Purpose Single Point
32. ASME B15.1- Mechanical Power Transmission Apparatus
33. ASME B15.1A- Addenda to B15.1
34. ASME B15.1B- Addenda to B15.1
35. ASME B20.1- Conveyors and Related Equipment, with Interpretations A and B
36. ASME B20.1A and B20.1B- Addenda to B20.1
37. ASME/CEMA 350- Screw Conveyors
38. ASME/CEMA 401- Unit Handling Conveyors - Roller Conveyors - Non-Powered
39. ASME/CEMA 402- Unit Handling Conveyors - Belt Conveyors
40. ASME/CEMA 403- Unit Handling Conveyors - Belt Driven Live Roller Conveyors
41. ASME/CEMA 404- Unit Handling Conveyors - Chain Driven Live Roller Conveyors
42. ASME/CEMA 405- Packaging Handling Conveyors - Slant Conveyors

APPENDIX B

This appendix is an excerpt of a cross-comparison chart for the Standard Industrial Classification (SIC) codes and the North American Industry Classification System (NAICS) which is intended to assist enforcement personnel in identifying related industries and the new classification system. The source of this excerpt was NAICS United States, 1997, Appendix B.

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
2011		Meat Packing Plants	311611	Animal (except Poultry) Slaughtering (pt)
2013		Sausages and Other Prepared Meat Products		
2013	pt	Lard Made From Purchased Material	311613	Rendering and Meat Byproduct Processing (pt)
2013	pt	Except Lard Made From Purchased Material	311612	Meat Processed from Carcasses (pt)
2015		Poultry Slaughtering and Processing		
2015	pt	Poultry Processing	311615	Poultry Processing
2015	pt	Egg Processing	311999	All Other Miscellaneous Food Manufacturing (pt)
2022		Natural, Processed, and Imitation Cheese	311513	Cheese Manufacturing
2051		Bread and Other Bakery Products, Except Cookies and Crackers	311812	Commercial Bakeries (pt)
2099		Food Preparations, NEC		
2099	pt	Reducing Maple Sap to Maple Syrup	111998	All Other Miscellaneous Crop Farming (pt)
2099	pt	Marshmallow Crème	31134	Nonchocolate Confectionery Manufacturing (pt)
2099	pt	Peanut Butter	311911	Roasted Nuts and Peanut Butter Manufacturing (pt)
2099	pt	Potatoes, Dried and Packaged with Other Ingredients Made in Dehydrated Plants, and Bouillon	311423	Dried and Dehydrated Food Manufacturing (pt)
2099	pt	Perishable Prepared Food	311991	Perishable Prepared Food Manufacturing
2099	pt	Rice, Uncooked and Packaged with Other Ingredients Made in Rice Milling	311212	Rice Milling (pt)
2099	pt	Tortillas	31183	Tortilla Manufacturing
2099	pt	Dry Pasta Packaged with Other Ingredients Made in Dry Pasta Plants	311823	Dry Pasta Manufacturing (pt)
2099	pt	Tea	31192	Coffee and Tea Manufacturing (pt)
2099	pt	Vinegar, Prepared Dips Except Dairy and Cider	311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing (pt)
2099	pt	Spices and Extracts	311942	Spice and Extract Manufacturing (pt)
2099	pt	Other	311999	All Other Miscellaneous Food Manufacturing (pt)

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
2299		Textile Goods, NEC		
2299	pt	Broadwoven Fabric of Jute, Linen, Hemp, and Ramie and Handwoven	31321	Broadwoven Fabric Mills (pt)
	pt	Nonwoven Felt	31323	Nonwoven Fabric Mills (pt)
	pt	Finishing Thread and Yarn of Flax, Hemp, Jute, Linen, and Ramie	313312	Textile and Fabric Finishing (except Broadwoven Fabrics) Mills (pt)
	pt	Narrow Woven Fabric of Jute, Linen, Hemp, and Ramie	313221	Narrow Fabric Mills (pt)
	pt	Thread of Hemp, Linen, and Ramie	313113	Thread Mills (pt)
	pt	Yarn of Flax, Hemp, Jute, and Ramie	313111	Yarn Spinning Mills (pt)
	pt	Recovery and Processing of Fibers and Waste	314999	All Other Miscellaneous Textile Product Mills (pt)
2411		Logging	11331	Logging
2421		Sawmills and Planing Mills, General		
2421	pt	Lumber Manufacturing from Purchased Lumber, Softwood Cut Stock, Wood Lath and Planing Mill Products	321912	Cut Stock, Resawing Lumber, and Planing (pt)
2421	pt	Sawmills	321113	Sawmills (pt)
2421	pt	Softwood Flooring	321918	Other Millwork (including Flooring) (pt)
2421	pt	Kiln Drying	321999	All Other Miscellaneous Wood Product Manufacturing (pt)
2426		Hardwood Dimension and Flooring Mills		
2426	pt	Hardwood Flooring	321918	Other Millwork (including Flooring) (pt)
2426	pt	Wood Furniture Frames	337215	Showcase, Partition, Shelving, and Locker Manufacturing (pt)
2426	pt	Hardwood Dimension Lumber Made from Logs and Bolts	321113	Sawmills (pt)
2426	pt	Other Hardwood Dimension Except, Flooring	321912	Cut Stock, Resawing Lumber, and Planing (pt)
2431		Millwork		
2431	pt	Wood Windows and Doors	321911	Wood Window and Door Manufacturing
2431	pt	Except Wood Windows and Doors	321918	Other Millwork (including Flooring) (pt)
2434		Wood Kitchen Cabinets	33711	Wood Kitchen Cabinet and Countertop Manufacturing (pt)
2448		Wood Pallets and Skids	32192	Wood Container and Pallet Manufacturing (pt)
2511		Wood Household Furniture, Except Upholstered		
2511	pt	Wood Box Spring Frames	337215	Showcase, Partition, Shelving, and Locker Manufacturing (pt)

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
2511	pt	Except Wood Box Spring Frames	337122	Wood Household Furniture (except Upholstered) Manufacturing (pt)
2621		Paper Mills		
2621	pt	Except Newsprint Mills	322121	Paper (except Newsprint) Mills (pt)
2621	pt	Newsprint Mills	322122	Newsprint Mills (pt)
2653		Corrugated and Solid Fiber Boxes	322211	Corrugated and Solid Fiber Box Manufacturing (pt)
2671		Packaging Paper and Plastics Film, Coated and Laminated		
2671	pt	Single-Web Paper, Paper Multiweb Laminated Rolls and Sheets for Packaging Uses	322221	Coated and Laminated Packaging Paper and Plastic Film Manufacturing
2671	pt	Plastics Packaging Film and Sheet	326112	Unsupported Plastics Packaging Film and Sheet Manufacturing
2673		Plastics, Foil, and Coated Paper Bags		
2673	pt	Except All Plastics	322223	Plastics, Foil, and Coated Paper Bag Manufacturing
2673	pt	Plastics Bags	326111	Unsupported Plastics Bag
2752		Commercial Printing, Lithographic		
2752	pt	Quick Printing	323114	Quick Printing (pt)
2752	pt	Except Quick Printing	323110	Commercial Lithographic Printing (pt)
3089		Plastics Products, NEC		
3089	pt	Pipe Fittings	326122	Plastics Pipe and Pipe Fitting Manufacturing (pt)
3089	pt	Plastics Sausage Casings	326121	Unsupported Plastics Profile Shape Manufacturing (pt)
3089	pt	Finished Plastics Furniture Parts	337215	Showcase, Partition, Shelving, and Locker Manufacturing (pt)
3089	pt	Other	326199	All Other Plastics Product Manufacturing (pt)
3272		Concrete Products, Except Block and Brick		
3272	pt	Dry Mixture Concrete	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing (pt)
3272	pt	Concrete Pipes	327332	Concrete Pipe Manufacturing
3272	pt	Other Concrete Products	32739	Other Concrete Product Manufacturing
3315		Steel Wiredrawing and Steel Nails and Spikes		
3315	pt	Steel Wire Drawing	331222	Steel Wire Drawing
3315	pt	Nails, Spikes, Paper Clips, and Wire Not Made in Wire Drawing Plants	332618	Other Fabricated Wire Product Manufacturing (pt)

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
3316		Cold-Rolled Steel Sheet, Strip, and Bars	331221	Rolled Steel Shape Manufacturing (pt)
3317		Steel Pipe and Tubes	33121	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
3325		Steel Foundries, NEC	331513	Steel Foundries (except Investment)
3423		Hand and Edge tools, Except Machine Tools and Handsaws	332212	Hand and Edge Tool Manufacturing (pt)
3441		Fabricated Structural Metal	332312	Fabricated Structural Metal Manufacturing (pt)
3443		Fabricated Plate Work (Boiler Shops)		
3443	pt	Fabricated Plate Work and Metal Weldments	332313	Plate Work Manufacturing
3443	pt	Power Boilers and Heat Exchanges	33241	Power Boiler and Heat Exchanger Manufacturing (pt)
3443	pt	Heavy Gauge Tanks	33242	Metal Tank (Heavy Gauge) Manufacturing
3443	pt	Metal Cooling Towers	333414	Heating Equipment (except Warm Air Furnaces) Manufacturing (pt)
3444		Sheet Metal Work		
3444	pt	Ducts, Flumes, Flooring, Siding, Dampers, etc.	332322	Sheet Metal Work Manufacturing
3444	pt	Metal Bins and Vats	332439	Other Metal Container Manufacturing (pt)
3444	pt	Cooling Towers	333414	Heating Equipment (except Warm Air Furnaces) Manufacturing (pt)
3446		Architectural and Ornamental Metal Work	332323	Ornamental and Architectural Metal Work Manufacturing (pt)
3462		Iron and Steel Forgings	332111	Iron and Steel Forging
3465		Automotive Stamping	33637	Motor Vehicle Metal Stamping
3469		Metal Stamping, NEC		
3469	pt	Metal Stamping, NEC (Except Kitchen Utensils, Pots and Pans for Cooking and Coins)	332116	Metal Stamping
3469	pt	Kitchen Utensils and Pots and Pans for Cooking	332214	Kitchen Utensil, Pot, and Pan Manufacturing
3496		Miscellaneous Fabricated Wire Products		
3496	pt	Grocery Carts	333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing (pt)
3496	pt	Except Grocery Carts	332618	Other Fabricated Wire Product Manufacturing (pt)
3499		Fabricated Metal Products, NEC		

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
3499	pt	Metal Furniture Frames	337215	Showcase, Partition, Shelving, and Locker Manufacturing (pt)
3499	pt	Metal Motor Vehicle Seat Frames	33636	Motor Vehicle Seating and Interior Trim Manufacturing (pt)
3499	pt	Powder Metallurgy	332117	Powder Metallurgy Part Manufacturing
3499	pt	Metal Boxes	332439	Other Metal Container Manufacturing (pt)
3499	pt	Safe and Vault Locks	33251	Hardware Manufacturing (pt)
3499	pt	Metal Aerosol Valves	332919	Other Metal Valve and Pipe Fitting Manufacturing (pt)
3499	pt	Other Metal Products	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
3544		Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds		
3544	pt	Except Industrial Molds	333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
3544	pt	Industrial Molds	333511	Industrial Mold Manufacturing
3564		Industrial and Commercial Fans and Blowers, and Air Purification Equipment		
3564	pt	Air Purification Equipment	333411	Air Purification Equipment Manufacturing
3564	pt	Fans and Blowers	333412	Industrial and Commercial Fan and Blower Manufacturing
3585		Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment		
3585	pt	Motor Vehicle Air-Conditioning	336391	Motor Vehicle Air-Conditioning Manufacturing
3585	pt	Except Motor Vehicle Air-Conditioning	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing
3599		Industrial and Commercial Machinery and Equipment, NEC		
3599	pt	Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except Motor Vehicle	336399	All Other Motor Vehicle Part Manufacturing (pt)
3599	pt	Flexible Metal Hose	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
3599	pt	Carnival Amusement Park Equipment	333319	Other Commercial and Service Industry Machinery

SIC and NAICS Note: pt – Part of; NEC – Not Elsewhere Classified				
SIC	PT	SIC TEXT	NAICS	NAICS TEXT
				Manufacturing (pt)
3599	pt	Machine Shops	33271	Machine Shops
3599	pt	Other Industrial and Commercial Machinery and Equipment	333999	All Other Miscellaneous General Purpose Machinery Manufacturing (pt)
3714		Motor Vehicle Parts and Accessories		
3714	pt	Dump-Truck Lifting Mechanisms and Fifth Wheels	336211	Motor Vehicle Body Manufacturing (pt)
3714	pt	Gasoline Engines Including Rebuilt and Engine Parts Including Rebuilt for Motor Vehicles	336312	Gasoline Engine and Engine Parts Manufacturing
3714	pt	Wiring Harness Sets, Other than Ignition; Block Heaters and Battery Heaters; Instrument Board Assemblies; Permanent Defroster; Windshield Washer-Wiper Mechanisms; Cruise Control Mechanisms; and Other Electrical Equipment for Internal Combustion Engines	336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing (pt)
3714	pt	Steering and Suspension Parts	33633	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
3714	pt	Brake and Brake Systems, Including Assemblies	33634	Motor Vehicle Brake System Manufacturing (pt)
3714	pt	Transmissions and Power Train Parts, Including Rebuilding	33635	Motor Vehicle Transmission and Power Train Parts Manufacturing
3714	pt	Other Motor Vehicle Parts	336399	All Other Motor Vehicle Parts Manufacturing (pt)

APPENDIX C

AMPUTATIONS TARGETING METHODOLOGY

NATIONAL DATA:

Review Process for Industries with Significant Inspection Histories (High IMIS¹ Numbers)

1. OSHA selected five standards (29 CFR 1910.147, .212, .213, .217, and .219) that are generally recognized as being related to amputation hazards.
2. OSHA IMIS data covering fiscal years 1999-2005 identified those industries with 40 or more federal OSHA inspections with one or more violations of the standards listed in #1 above.
3. OSHA limited the range to the Standard Industrial Classification Manual, Division D., Manufacturing, Major Group 20 through Major Group 39. This range encompasses all manufacturing operations and addresses amputation issues.

IOWA DATA:

BLS Data Selection Process for Industries with High BLS Numbers:

1. Iowa OSHA used three years of National BLS Data (Calendar year 2003, 2004, and 2005) on the number of amputations.
2. Iowa OSHA limited the range to the NAICS, Manufacturing sector 31-33.
3. Iowa OSHA selected NAICS with BLS numbers of 50 or more amputations for any of the years 2003, 2004, or 2005.
4. The process yielded 56 NAICS.

Selection Process for Industries with High BLS Rates:

1. Iowa OSHA used three years of Iowa BLS Data (Calendar year 2003, 2004, and 2005) on incidence rates for nonfatal occupational injuries and illnesses involving total recordable cases per 100 full-time workers.
2. Iowa OSHA limited the range to the NAICS, Manufacturing sector 31-33.
3. Iowa OSHA selected NAICS with High National BLS numbers and Iowa BLS incidence rates of 10.0 or greater for total recordable cases for any of the years 2003, 2004, or 2005.
4. The process yielded 8 NAICS which comprise Iowa OSHA's list of industries that will be a part of the Local Emphasis Program for Amputations.

¹ IMIS- Integrated Management Information System. OSHA's database for enforcement data.

APPENDIX D
(To be used for guidance/not inclusive)

1999-2002 (Table R-25*) Combined Amputation Sources
Sources of Amputations: Machinery and Equipment
Benders, Rollers and Shapers
Press Brakes (All Types)
Casting Machinery
Conveyors – Belt, Chain, Live Roller, and Auger Screw Conveyors
Drills – Stationary
Extruding Machinery
Grinders, Abraders, and Meat Grinders
Plastic Injection Molding Machinery
Milling Machines
Mixers, Blenders, Whippers, Slicers, and Food Beverage Processing Equipment
Packing, Wrapping, Bundling Machinery
Presses (Mechanical, Hydraulic, and Pneumatic)
Printing Presses
Sawing Machinery - (Band, Table, Radial Arm Saws)
Shears (All Types)

***Bureau of Labor Statistics (BLS) Table R25. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away from Work by Source of Injury or Illness and Selected Natures of Injury or Illness**

